

# Formal and informal sustainability reporting: an insight from a mining company's subsidiary in Ghana.

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## **Formal and informal sustainability reporting: An insight from a mining company's subsidiary in Ghana**

**Purpose** – Using a subsidiary of a multinational mining company in Ghana as a case, this study examines the formal and informal forms and channels of sustainability reporting in an emerging economy context.

**Design/methodology/approach** – Semi-structured interviews were conducted among managers and employees of the mining company and members of their host community. Based on the interview themes, archival data were extracted from the 2020 Integrated Annual Report of the case company to corroborate the results from the interviews.

**Findings** – We found that most of the stakeholders from the host community interviewed were not aware and, to an extent, not interested in formal sustainability reports. In place of that, the management of the mining subsidiary employs informal channels of communication, including meetings and durbars, to verbally engage the local community and their representatives on sustainability matters. While the formal sustainability reports met the internal requirements set by the parent company, the informal engagements were critical for gaining external legitimacy from the host community and other interest groups. Hence, we argue that mining companies and their subsidiaries, particularly in developing economies, need to consider informal forms of sustainability reporting alongside the formal channels to engage local communities to address sustainability issues and avert disruptions to their operations.

**Originality/value** – Sustainability reporting studies have focused mainly on annual reports published in print or corporate websites, ignoring informal forms of sustainability reporting. This study sheds light on the informal forms of sustainability reporting. This is important as formal forms of sustainability reporting may be less useful for engaging local mining communities in developing economy contexts.

**Keywords:** Mining industry; Forms; Sustainability reporting; Channels; Ghana.

**Paper type:** Research paper

## **1.0 Introduction**

For centuries, the mining industry has played a significant role in raising the living standard for humanity globally (Cho, Michelin, Patten & Robert, 2014; Gibassier & Schaltegger, 2015; Moran, Lodhia, Kunz & Huisin, 2014; Selmier, 2017). Nevertheless, the growth of the mining industry, especially in emerging economies in the last few decades, has culminated in several environmental and social repercussions (Bebbington, Unerman & O'Dwyer, 2014; Yakovleva, Kotilainen & Toivakka, 2017). Consequently, the global and local communities are increasingly demanding a greater share of benefits from mining projects, more participation in decision making, and the assurance that mining operations will be conducted sustainably (Prno, 2013). Not surprisingly, recently, sustainability reporting activities of multinational companies (MNCs) are rigorously scrutinized in the developed economies where the forms and channels of sustainability reporting could either be formal or informal. Formal sustainability reporting occurs when the content of the sustainability report is well-structured per laid down standards. On the other hand, if the content of a sustainability report is less or not structured following any widely accepted standard, we term it as an informal sustainability report. Therefore, the purpose of this paper is to explore the various forms and channels (formal and informal) of sustainability reporting of a subsidiary of a multinational mining corporation's subsidiary, fictitiously known as Ghana Mining Company, operating in Ghana.

An important tool through which mining companies attempt to meet these demands is sustainability reporting (Haider, M. B., & Nishitani, 2020). Lodhia & Hess (2014, p. 43) affirm that "the mining industry requires effective sustainability reporting to transition to sustainability." However, we believe that there is evidence of how the reporting was done with sustainability reporting. Nonetheless, significant variations remain among companies operating from different institutional contexts (Amoako et al., 2018; 2017; 2015; Tilt, Qian, Kuruppu & Dissanayake, 2020), especially regarding the forms and channels of sustainability reporting. Thus, the forms and channels through which sustainability reporting takes place are as important as the message (Lodhia, 2018; Verčič & Špoljarić, 2020). However, there is not much work in this regard.

Sustainability reporting, which refers to reporting by organisations about their social and environmental effects (Gurvitsh and Sidorova, 2012), has been extensively studied in advanced

economies. Nonetheless, albeit the slow-growing research in developing countries, such studies are still fragmented (Abeydeera et al., 2016). The relevance of recognising the specific context of developing countries has been noted (Tilt, 2016, 2018) as a key to solving sustainability challenges at the local and global levels. Therefore, the forms and channels of sustainability reporting, which are context relevant, are critical to consider as this has implications on policy and practice that could be relevant locally and globally.

Among developing countries, the extant limited research tends to be on countries in the other continents, such as India (Jain & Winner, 2016), Kazakhstan (Orazalin & Mahmood, 2019), Bangladesh (Momin and Parker, 2013) and Sri Lanka (Dissanayake et al., 2016), and mostly on industries other than mining. Sustainability reporting practices in Africa's mining sector, particularly in SSA, which is noted for unique and significant sustainability challenges, are quite limited, with few in South Africa (such as de Villiers and Alexander, 2014; Marx & van Dyk, 2011). Meanwhile, Bhatia and Tulia (2018, p. 2017) established that "developing nations provide more information on sustainability practices than the companies in the developed nations." This could be *prima facie* evidence on the attention and demand for such reporting within emerging economies, particularly in SSA.

Jones and Wicks (1999) argue that most researchers lack both "the substantive prediction and description of the mechanisms through which the predicted behaviour might occur" (p. 208). This is a critical oversight because the forms and channels of reporting are important as the message. Therefore, it is necessary to explore how the mining industry uses the various forms and channels in their sustainability reporting to improve their legitimacy and recognize where corporate reporting could be enriched. Taking inspiration from this, we draw on stakeholder theory to explore the forms and channels of sustainability reporting of a subsidiary of a multinational mining corporation operating in Ghana. Furthermore, the study emphasizes the need for managers to recognize the challenges MNCs' subsidiaries encounter in aligning their sustainability disclosure practices with their parent organisations and pressures from within the mining industry and the host communities.

We intend to contribute to the knowledge on social and environmental accounting provide some policy and practice implications for firms and governments and regulators by identifying the various forms and channels that can serve as a credible medium of stakeholder interaction of MNEs operating in developing economies. Organisations that practice sustainability reporting have been recognised as transparent, provide accurate and reliable information to the users, and increase trust

and confidence in their stakeholders and gain legitimacy for their activities (Dawkins and Ngunjiri, 2008). We believe that informal sustainability reporting is as important as formal reporting. Both are powerful mechanisms for building trust and confidence by keeping in touch with several stakeholders, thus ensuring an interactive dialogue with stakeholders faster and cheaper. Informal forms of reporting such as Facebook and WhatsApp dialogue can also create a genuinely based stakeholder engagement process based on a democratic solicitation of stakeholder opinion (Manetti & Bellucci, 2016). This study explains whether the forms and channels that companies voluntarily adopt in disseminating sustainability information are of genuine reasons or whether they are merely another method of legitimization. We, therefore, contribute to the knowledge gap in the accounting literature regarding the role informal sustainability reporting forms and channels play in promoting credible and efficient stakeholder participation, particularly in developing economies.

Our findings support stakeholder theory, which recommends organizations use a pragmatic approach to create dialogue and engagement with different stakeholder groups (Stocker, de Arruda, de Mascena & Boaventura, 2020). Similarly, our interpretation of sustainability reporting forms and channels broadens stakeholder engagement as a dynamic and strategic phenomenon. Therefore, this article investigates the forms and channels for the sustainability reporting of a mining company's subsidiary in Ghana, an emerging economy. For the sake of anonymity, the case mining subsidiary is referred to as the '*Ghana Mining Company*.'

We drew on stakeholder theory and semi-structured interview techniques to examine sustainability reporting forms and channels of a mining subsidiary in Ghana, an emerging economy. To achieve this aim, we focused on the following research questions:

- 1) What are the forms of sustainability reporting used by a mining subsidiary in Ghana?
- 2) What are the channels of sustainability reporting used by a mining subsidiary in Ghana?

We used a mining company to answer the above questions because that industry is a pioneer of sustainability reporting (see Guenther, Hoppe & Poser, 2007) and has a higher reporting rate than other industries (Perez & Sanchez, 2009; KPMG 2017). Also, we chose a mining company in Ghana as that country is the largest gold producer in Africa (Ghana Chamber of Mines, 2020). Yet, despite the significant economic contribution of the mines, there have been increasing complaints about their negative effects on the environment and significant disruptions in social structures (Patnaik et al., 2018). These include the displacement of communities living on mineralized lands, and the acquisition of farmlands, hence, denying

mining communities a source of livelihood (Essah & Andrews, 2016). Meanwhile, sustainability reporting in Ghana is perceived to be in its infant stages with under-developed literature (Hinson, Gyabea & Ibrahim, 2015). Therefore, Ghana is a suitable empirical setting for gaining deeper insights into the forms of sustainability reporting within the mining industry of an emerging country.

The remnant of the article is presented as follows: Section 2.0 presents a review of the literature on stakeholder approach to sustainability reporting, the meaning and elements of sustainability reporting, the channels to sustainability reporting and sustainability reporting in the mining industry. The literature review is followed by Section 3, an overview of the Ghanaian Mining Sector and Ghana Mining Company. Section 4 discusses the methods, which is also followed by the research findings in Section 5. Section 6 discusses the study's findings, and Section 7, which is the last section, concludes and presents the study's implications.

## **2.0 Literature review**

This section discusses stakeholder theory and why it was adopted for this study. It further reviews extant studies on the forms and channels of sustainability reporting.

### **2.1. Stakeholder theory**

Freeman defines stakeholders as "any group or individual who can affect or is affected by achieving the organization's objectives" (1984, p. 46). This definition suggests a mutual association between an organisation's stakeholders and its management. Freeman's definition implies the possibility of both an instrumental stand to stakeholders from the business to boost its performance and the propensity of a normative and multifiduciary obligation to the organisation's stakeholders on the part of management (Manetti & Toccafondi, 2014). Thus, the normative aspect of stakeholder theory indicates that managers have a fiduciary duty to satisfy all stakeholders, not just to shareholders (Freeman, 1984; Evan & Freeman, 1988).

Berman, Wicks, Kotha, & Jones (1999) explain these two dimensions of Freeman's stakeholder connotations with the concept of "stakeholder orientation" (SO). SO is being defined as "attention given to multiple stakeholder groups among companies," such as "customers, shareholders, and employees" (Greenley & Foxall, 1997, p. 263). According to Waddock, Bodwell & Graves (2002), SO as a strategic behaviour is adopted to manage and engage stakeholders for opportunistic and ethical purposes. In defining the forms and channels of sustainability reporting, a key concern is an order of priority among the diverse stakeholders (De Giacomo & Bleischwitz, 2020). This is because stakeholder's strategic importance to an

organisation differs (Clarkson, 1995; Donaldson & Preston, 1995; Waddock, Bodwell & Graves (2002).

Mitchell, Agle & Wood (1997) developed a salience stakeholder model using power, legitimacy, and urgency to label stakeholders. The authors define stakeholder salience as "the degree to which managers give priority to competing stakeholder claims" (Mitchell et al., 1997, p. 854). Stakeholder salience concerning managerial attention is increasingly salient as they build up blends of these three features. On the one hand, Jawahar and McLaughlin (2001) claim that salience levels are based on a corporation's life cycle stage. For instance, investors are critically salient at start-ups, whereas customers reach their peak salience at the maturity stage (Neville, Bell & Whitwell, 2011).

On the other hand, Pfarrer et al. (2008) and Stocker, Arruda & Mascena (2019) posit that salience will vary based on the type of organizational misconduct at the center of stakeholders' demands. For instance, the authors suggested that activist groups and the local community upsurge in salience during social and environmental misconducts. Suchman (1995) concludes on this legitimacy contest, claiming that tension between the various forms of legitimacy seems to develop when there is a communication gap between organisation and its stakeholders. An important factor in poor communication is the form and channel of communication (Costa-Sánchez, Túniz-López & Míguez-González, 2020).

Several authors in the mining industry have identified various stakeholder groups: managers, shareholders, employees, consumers, board members, industry chambers, government officials, suppliers, buyers, trade-unions, distributors, insurance companies, local communities, legislators, regulators, professional associations, opinion-makers, non-governmental organisations, consultants, media, civil society, the religious and vulnerable groups (Ansu-Mensah, Marfo, Awuah & Amoako, 2021; Eden & Ackermann, 1998; Freeman & Reed, 1983). It has been established that the nature and interests of stakeholders vary and stakeholder theory presumes that managers must keep the diverse stakeholder interests in mind (e.g., Freeman, 1984; Harrison & Freeman, 1999) when embarking on sustainability reporting. Nonetheless, suppose the form and channels are ineffective for the type of message and impression organisations want to create. In that case, there could be a potential misunderstanding and even result in worse repercussions than if the intended message was kept by management. Not only does management's adoption of wrong channels impede communication, but doing so can trigger mistrust in stakeholders, particularly about the sincerity, transparency, and commitment

of management (Braun, Hernandez Bark, Kirchner, Stegmann & Van Dick, 2019). Therefore, the nature of a stakeholder and their diverse interests usually could determine the forms and channels of sustainability reporting. Similar to the argument of stakeholder salience, we believe that the forms and channels of sustainability reporting are not based on a unilateral management approach to stakeholders, rather on the dynamic context of stakeholder interactions (Andriof, Waddock, Husted, & Rahman, 2002; Lorenzo, Garcia Sanchez and Blazquez-Zaballos, 2013).

Despite the relevance of the effective choice of forms and channels of communication to stakeholders in sustainability reporting (Hartley and Lee, 1986; Morgan, 1990), limited attention has been given to the relative merits of different channels of sustainability reporting in emerging economies context. This exploratory study investigates the forms and channels of sustainability reporting, specifically within MNCs subsidiary operating in Ghana, an emerging economy.

## **2.2 Sustainability Reporting: The forms**

According to Buhr (2014), sustainability reporting is any medium that corporate bodies adopt to communicate with their stakeholders. These channels are usually both formal and informal. Thus, using a sample of mining companies in South Africa, Carels *et al.* (2013), in a qualitative study, analysed how contemporary corporate governance advances have influenced the degree that MNCs have used sustainability reporting in managing diverse stakeholder expectations. The study claims that corporate governance advancements and the "integrated reporting project have gone hand-in-hand with an increase in the level of disclosures and the extent to which these disclosures are integrated into corporate reports" (p. 957). Bebbington and Gray (2001), in an ethnographic case study in New Zealand, attempt to construct a sustainable cost calculator. Their study affirms that 'sustainability reporting' requires an organization to take responsibility and account for its repercussion on the various stakeholders. Hence, sustainability reporting serves as potentially a powerful tool that companies can adopt in influencing stakeholders' perceptions to contribute towards earning potential maximisation of organisations.

Nonetheless, these reports characteristically formal as they are documents covering corporate environmental, economic, and social policies, initiatives, objectives, performance and are increasingly attached with statements of third-party assurance (Kolk and Perego, 2008). They are mostly accompanied by supplementary material on the corporate website and elsewhere.



Formal reports are delivered via the internet to permit these additional materials to be accessed directly through the report on the website by hyperlink.

In advanced economies, sustainability reporting is mostly voluntary and formal. As such, Sustainability reporting literature has much focussed their attention on the standardisation of sustainability reporting, making it more formal (e.g., Bebbington and Unerman, 2018; Topple, Donovan, Masli, and Borgert, 2017; Sheth and Poojara, 2019; Kolk, Kourula, and Pisani, 2017). In a comparative study, Bebbington and Unerman (2018) examine the extant literature by focussing on "what firms really do" today to "what should be done" (a normative approach). They identified that large companies have of late make attempts to factor the United Nations Sustainable Development Goals (UNSDGs) as part of their sustainability reports and several professional bodies have taken the UNSDGs seriously. Several scholars have also investigated how MNEs have factored international standards to formalised sustainability reporting. Topple, Donovan, Masli, and Borgert (2017) examined 112 multinational firms in South-East Asia. The authors reported that formalising sustainability reporting by adopting international sustainability standards and guidelines like GRI and UNSDGs could enable MNEs to achieve the UNSDGs more successfully.

Similarly, Kolk, Kourula, and Pisani (2017) identified the means through which MNEs in formalising sustainability reporting have adopted the UNSDGs and the results on the fundamental aspects of Agenda 2030 such as people, planet, prosperity, and peace. In another study, Sheth and Poojara (2019) used firm value as the dependent variable, with the independent variables being sustainability disclosures and corporate governance. Their study established a very strong relationship between firm value, sustainability disclosures and corporate governance. Therefore, it is not surprising that Aparna & Siya (2018) argue that sustainability has contributed to the acquisition of listings in international stock markets by companies from developing nations; sustainability reporting is a prerequisite for many stock exchanges.

Evidence in the above extant studies suggests that sustainability reports have often created formal reporting for their sustainability initiatives (Sustainable value creation Survey, 2009). In these extant studies, much emphasis is on the trends in sustainability reporting trends and how these contents can be well shaped to meet international standards. Meanwhile, sustainability reporting forms and channels are also crucial as reporting content, yet not much attention has been paid to them in the literature.

### **2.3 Channels of sustainability reporting**

The traditional channel of sustainability reporting is through hard copies of annual reports (Cotter, Najah & Wang, 2011; Kend, 2015; Krasodomska & Cho, 2017; Lodhia, 2016). However, recently, Crane (2018) explains that some organisations opt to summarize their sustainability initiatives and attainments in a compelling, digital format, giving easy access to such information from a several devices. This allows sustainability reporting to be done with less environmental impacts in the printing and distribution paper reports and reaching a wider audience than could be done via traditional reporting media. The corporate sustainability reporting survey of the KPMG (2014) indicates that increasingly several MNEs are adopting the internet to spread their sustainability performance as a result of the high rising number of internet users and the perceived benefits of the internet (Lodhia, 2018). Corporate websites serve as the platform for organizations to spread annual reports and supplementary information of on specific locations at a faster but cheaper and easier means (Duff, 2016; Morhardt, 2010). Recently, several studies have revealed that social media has played a key role in disseminating sustainability information by multinationals. Albarrak, Elnahass & Salama (2019) studied whether firms on the US NASDAQ stock exchange over the period 2009 – 2015 can influence their equity (COE) cost. The authors found out that firms reporting their carbon information on social media affected their cost of capital. This supports claims that a wider dissemination of carbon disclosures permits potential investors to enlighten a firm's information and increases investor populations, improving firm value and minimizing the cost of equity (Byun & Oh, 2018; Heinkel, Kraus, & Zechner, 2001). Similarly, Castelló, Etter & Arup Nielsen (2016) examined stakeholder interest in social media and the idea of networked legitimacy. The authors argue that this strategy gains credibility by allowing people to participate in nonhierarchical open platforms and co-create agendas. As a result, when firms can reduce their influence over engagements and relate to their publics in a nonhierarchical manner, credibility gains can increase. Gómez-Carrasco, Guillamón-Saorín and García Osma (2020) looked at the content of over a million Twitter microblogs about CSR in the banking industry. The studies concentrated on key issues MNEs consider in their sustainability reports, which we categorize as Core or Supplementary based on their relationship to key stakeholders. The authors found that using Twitter to share CSR information in social media indicated major variations. Similarly, Lodhia, Kaur & Stone (2020) discovered that just 46% of the top 50 Australian Stock Exchange (ASX) listed companies used social media (only Facebook, Twitter, and LinkedIn being used) for sustainability reporting. Companies that successfully used social media, on the

other hand, were able to gain credibility through information disclosure and interaction with stakeholders.

However, it is important to state that these recent studies on the channel of sustainability reporting were discovered in advanced economies where technology is at its peak and internet facilities are accessible when needed. Meanwhile, most multinationals operate globally, including Africa, and Africa has been identified as the emerging hub of global economic growth. This makes it necessary to study how sustainability reporting forms and channels in the mining sector have evolved in Africa. For a long, key stakeholders, including accounting scholars, have called on researchers to engage with reporting organisations (Adams & Whelan 2009; Parker 2005; Bellucci, Simoni, Acuti & Manetti, 2019).

Nonetheless, there has been a proliferation of sustainability reporting studies reports in the mining industry (Fonseca, McAllister & Fitzpatrick, 2012; Amoako et al., 2017; Guenther et al., 2007; Jenkins & Yakovleva, 2006; KPMG, 2014; Perez & Sanchez, 2009). Comparably, only a limited number of such studies have been conducted in developing economies (Lodhia & Hess, 2014). Yet, none of these studies focused on the forms and channels of sustainability reporting. Furthermore, most of the studies are primarily limited to content analysis which is mostly limited to identifying trends and assessing quality using secondary data while ignoring engagement with reporting managers and organisations to understand their perspectives and motivations for sustainability reporting. Hence, more research has been called that engages with reporting organisations to understand the forms and channels of sustainability reporting (see Adams & Frost 2008; Adams & Larrinaga Gonzalez, 2007; Parker, 2005). Drawing on Stakeholder theory, this article uses semi-structured interviews to examine the formal and informal forms and channels of sustainability reporting in a developing economy.

Insert Figure 1 about here

Internal and external factors drive the forms of sustainability reporting. Hence, firm characteristics and strategic objectives, as well as external institutional elements that emphasize stakeholder pressure related to aspects of the changing business environment, may drive sustainability reporting of firms (Buhr et al., 2014; Deegan, 2002; Borkowski et al., 2010; Kend, 2015; Krasodomska & Cho, 2017). Secondly, even though sustainability reporting activities are context-relevant (Cho et al., 2014; Gibassier and Schaltegger, 2015), most of the existing studies tend to focus on the reporting practices of the parent company (Ike, Donovan, Topple & Masli, 2021; Ervits, 2021; Marfo et al., 2017). Thus, the literature overlooks the

forms and channels for subsidiary companies' sustainability reporting especially, those in emerging countries (Yang & Rivers, 2009).

Furthermore, extant literature reviewed on sustainability reporting in the extractive industry among sub-Saharan African countries such as South Africa (de Villiers, Low & Samkin, 2014; Hamann, & Kapelus, 2004; Mudd, 2012; Visser, 2002; Northey, Haque & Mudd, 2013) and Nigeria (Herbert, Nwaorgu, Onyilo & Iormbagah, 2020; Uwuigbe et al., 2018; Asaolu, Agboola, Ayoola & Salawu, 2012), Ghana (Amoako, Amoako and Marfo, 2018) has little to show on the forms and channels of sustainability reporting. These shreds of evidence are insufficient for academics to empirically appreciate the forms and channels of sustainability reporting, particularly in emerging economies where the literacy rate is high (Susuman, Chialepeh, Bado & Lailulo, 2016) the few literates may be interested in reading sustainability reports. This trend is worrying considering the evidence that MNCs are continuously setting up subsidiaries in emerging countries (Jackson & Horwitz, 2018; Momin & Parker, 2013), which are more vulnerable to sustainability challenges due to weak institutions (Patnaik et al., 2018).

In summary, there has been an increase in studies of sustainability reporting in developed economies in the mining industry. Yet, there is a dearth of knowledge of sustainability reporting in developing economies. Interestingly, the limited number of existing studies in developing economies are mostly based on content analysis and do not engage firms and key stakeholders nor examine the forms and channels for sustainability disclosures of subsidiary companies operating in developing countries. This study aims at addressing these gaps. The next section discusses the methods used in this study.

### **Sustainability reporting in emerging economies**

Tilt et al. (2020) explain that since the 2000s, there has been an increase in sustainability reporting in developing countries. KPMG corporate responsibility disclosure surveys from 2008 to 2019 highlight the substantial progress made in the last decade, especially in the Asia Pacific and Latin American regions. This may be due in part to the increased number of government reporting laws and guidelines implemented by financial market regulators and stock exchanges like the SSE (Bartels et al., 2016). Rising regulations may be motivated by a desire to lower knowledge and transaction costs in emerging economies with less open markets (Toye, 2000). These regulations make the forms and channels of such sustainability reports

standardized and very formal. Nonetheless, most developed countries, except a few pioneers in sustainability reporting, continue to fall behind (KPMG, 2017).

The limited research is characterized by content analysis of reports and empirical examinations of determinants developed from hypotheses or rationales mostly used in developed world studies (Tilt, 2016, 2018). Research is scarce into the real-world contexts of developed countries. Several studies (such as Tilt, 2018; Ansu, Marfo, Salia and Amoako, 2021) point out that sustainability reporting analysis needs to look at the complex socio-political and economic contexts in which sustainability reporting occurs. In terms of regulatory structures, social and cultural growth, and economic aspirations, developing countries vary significantly from developed countries. These variations affect the forms and channels of sustainability reporting as emerging economies and less formalised in terms of regulatory and administrative structures (Tilt et al., 2020)

Other motives which are more business-related include competitive advantage, public relations, and corporate growth. However, in Nigeria, pressure on multinational corporations emanates largely from external stakeholders, particularly community members (Achua, 2008). In Ghana, sustainability tends to be primarily understood as social, and most international business organizations engage in sustainability activities because of legal obligations and the expectation of economic benefits.(Kuada and Hinson, 2012; Abugre and Nyuur, 2015). Studies were conducted in Botswana (Lindgreen et al., 2009), Uganda (Katamba et al., 2012), Zimbabwe (Nyahunzvi, 2013), Malawi (Mzembe and Meaton, 2014), and South Sudan (Ives and Buchner, 2011) showed similar findings. Thus, most of these studies show that social concerns take a larger proportion of sustainability practices and disclosures in Sub-Sahara Africa; business-case drivers are key drivers, but stakeholder expectations provide the most barriers (Tilt et al., 2020). Therefore, it is critical to learn more about how organisations can use the various forms and channels to communicate to stakeholders on their sustainability activities. This is necessary because communities are the main beneficiaries of social sustainability in emerging economies.

Nonetheless, it has been established that these communities have high illiteracy rates (Dumenu & Obeng, 2016). Consequently, the formal sustainability reports for investors and regulators may not be suitable for communicating to community members. Therefore, it is worthy of exploring how mining firms in emerging economies report to such crucial stakeholders who have wide expectation gaps.

### **3.0. Research context**

#### **3.1. Overview of Ghana's mining sector**

Archaeological evidence indicates that Ghana was inhabited as early as 3,000 to 4,000 years ago (GhanaWeb, 2018). The modern country of Ghana is the former British colony known as the "Gold Coast" (Hilson, 2002; McLaughlin & Owusu-Ansah, 1994). After independence in 1957, its name was changed to Ghana (Acquah, 1958).

Ghana, a developing economy, was selected for this analysis because it is Africa's largest gold producer (BBC, 2019). Furthermore, among other countries in Sub-Saharan Africa, Ghana is respected as a model for African growth (BBC, 2020). As a heavy mining country, Ghana faces a slew of environmental issues from over 300 registered small-scale and large-scale mining companies, not to mention hundreds of illegal miners (KPMG, 2014; Mbendi, 2016). Consequently, Ghana is a member of the Extractive Industry Transparency Initiative (EITI); a public disclosure forum for extractive companies' payments to governments, to empower people to keep governments accountable to improve natural resource management, eliminate corruption, and minimize conflict (Haufler, 2010).

Boso, Afrane, & Inkoom (2017) posit that Ghana's mining sector has directly impacted the foreign direct investment of the country, contributing to foreign exchange earnings and employment opportunities of around 24,000 workers. The mining industry surpassed the banking sector as the country's largest taxpayer in 2016, bringing in GHS1.6 billion (US\$383 million) to the Ghana Revenue Authority. This amounted to 15.8% of all direct taxes and 5% of all government revenue. In 2017, the tax contribution went up from GH1.6 billion to GH2.16 billion (Ministry of Finance, 2020).

The large mining enterprises in Ghana's have a greater share of responsibility for economic, social, and environmental challenges than small and medium-sized (SMEs) mining firms (Arthur, Wu, Yago & Zhang, 2017). These large firms have listings with renowned stock markets like the Dow Jones Stock Exchange, New York Stock Exchange and the Johannesburg Stock Exchange (Amoako et al., 2017). Consequently, these firms are under stakeholders' pressure to be sustainable in their operations (Stratos, 2003; Daub, 2007). Therefore, unlike SME mining firms which are mostly owned locally, multinational mining firm's subsidiaries are mandated to formally publish their sustainability performance through annual reports for data analysis and result discussions (Alazzani and Wan-Hussin, 2013). Nonetheless, key stakeholders such as community members who may not access these formal reports are also

engaged through informal channels. These channels, however, are not properly documented. We, therefore, focus on the forms and channels of sustainability reporting of a multinational mining subsidiary operating in Ghana.

### **3.2. Profile of Ghana Mining Company**

Ghana Mining Company's parent company is a publicly-traded mining company on various stock markets, including the New York Stock Exchange. The mining company has eight mines and two ventures on five continents. The parent company's shares combined with other investors sum up to 90% and the Ghanaian government owns the remaining 10%. There are nine host communities in the Ghana Mining Company, with around 15,000 people. Ghana Mining Company has won several sustainability awards and is part of the Dow Jones Sustainability Index. Existing evidence suggests that Ghana Mining Company has gone beyond its economic priorities to engage stakeholders in the process of supporting its employees and the community by building schools and roads, providing recreation and scholarship programs (Boadi, He, Darko & Abrokwah, 2018).

### **4.0. Methods**

Studies on sustainability disclosures (such as Amoako et al, 2017; Aerts *et al.*, 2006; Chen & Bouvain 2009; de Villiers & Alexander 2014; Fortanier *et al.* 2011) have relied mainly on archival data and content analysis of reports to establish the motivation for the sustainability reports of subsidiaries of the MNCs. Those studies did not engage external stakeholders that may have an interest in sustainability reporting. Instead, the above researchers drew their study participants from internal sources only – management and employees of the cases studied. Arguably such an approach to understanding MNCs' sustainability reporting may not demonstrate the forms and channels for sustainability. We, therefore, engaged both internal and external stakeholders of the Ghana Mining Company between January and August 2016 to understand the forms of sustainability reporting.

We employed a qualitative case research design (Yin, 2013) to understand the mining company's forms and channels for sustainability reporting. Case study research is preferable; (1) when the research questions ask details on how an incident occurred or why an incident occurred, (2) when the context is a relevant source of evidence (Yin, 2013) and (3) when the context of the event's occurrence is uncontrollable (Patton and Appelbaum, 2003). We used purposive and snowballing sampling to acquire data from participants involved in sustainability practices and the company's reporting. A sampling at Ghana Mining Company

began with selecting first, two middle managers who are key staff members on sustainability practices. After the interview with these managers, they then led us to the other three middle managers and employees. Community members were also sampled by picking from the closest town to the mine. This is because it is believed that the town's proximity to the mine could encourage a better relationship between the mine and the community. As such, the lead author first contacted the community representative of the closest town to the mine, who then led him to one traditional ruler and two community members. Qualitative data were also extracted from the 2020 Integrated Annual Report of Ghana Mining Company to support the results from the interviews. The search through the Integrated Annual Report was based on the interview themes on the channels and forms of sustainability reporting.

Some of the critical ethical considerations in qualitative research that we observed were obtaining consent and guaranteeing confidentiality from the respondents (Creswell, Hanson, Clark Plano & Morales, 2007). Therefore, to obtain consent for interviews, respondents who were perceived to be vulnerable were courteously requested to participate if they so wished. Going beyond what was done for all respondents, the lead researcher clarified to the various respondent groups the aim of the study, the use of the study findings, and the benefit the interviewee groups would gain from the study. The lead author further assured the respondents of the confidentiality of their identities. Confidentiality and consent forms were given to those who showed interest in participating in the study to sign.

Nonetheless, some of them did not sign by indicating that they were confident in the lead author to keep their identity anonymous. In guaranteeing their confidentiality and anonymity, measures were put in place to prevent tracing responses to participants who were rejected to be named. The identities of all participants were made anonymous, even though some of them did not have issues with their names being attached to quotations in the paper. A total of 15 respondents were interviewed (see Table 1). The interviews were recorded with the approval of the informants, and the interviews were transcribed verbatim and read over and over to gain deeper understanding of the data. This enabled us to develop key themes in the subject. The initial codes from each interview were compared with the others to develop the key themes and the sub-themes (see Table 2).

We aimed to acquire an extensive picture of the company's formal and informal forms and channels of sustainability reporting. Consequently, we asked the participants which kind of information the company reports on and how they received the information on sustainability.



The semi-structured interviews also helped us to map out stakeholders that receive such reports. We used open-ended questions based on an interview protocol. However, due to the interviews' interactive nature, the sequence and wording of questions differed from one interview to the other.

Please insert Table 1 About here

We coded the transcripts and notes from the interviews and analysed them manually. Pseudonyms were used to identify interviewees based on their affiliations (see Table 1). Case studies may be driven by theory or empirical data or both and bearing so our analysis and theorization were abductive (Yin, 2013). We used thematic analysis to facilitate an in-depth examination of the findings (Braun & Clarke, 2006). As recommended by Patton (2002), prior themes based on the research questions and emerging themes from the data were used as a means of finding relationships between extant theoretical and emerging concepts from this study to explore the similarities and variations in perceptions of different stakeholder groups (See Table 2)

Please Insert Table 2 About here

This was done by identifying and classifying the various forms and channels for sustainability reporting in the transcripts. We moved between data and stakeholder theory to link our research finding to theory, using induction and deduction in interpreting the data (Eisenhardt, 1989; Gioia et al., 2012; Strauss & Corbin 1998). Archival sources from annual reports and the internet were also used to complement the data and conclusions drawn from the semi-structured interviews. The analysis of interview data in social research raises potential ethical issues such as how independent respondents are in the research process (Richardson & Godfrey, 2003). However, in this study, interviewees consented to participate and openly discussed their opinions on why the mining company does sustainability reporting.

## **5.0 Results**

The findings suggest that sustainability reporting is of great value to the mining company and reporting is formal and informal. Formal sustainability reporting occurs among the mining company's subsidiary and its parents, investors, and regulators whilst the informal form of sustainability reporting occurs among community members, traditional rulers, and employees. In the formal forms of sustainability reporting, annual reports and websites are used, while the

informal sustainability reports are carried out via emails, social media, and notice boards sited at both the premises of the mining company and at various communities.

### **5.1. Formal forms and channels of sustainability reporting to regulators and shareholders**

The formal forms are usually in the form of reports, letters, and websites used in communicating with regulatory bodies, the subsidiary's regional office, and the head office.

*The aim of our integrated reporting suite is to enable our stakeholders, including capital providers, to make an informed assessment of Ghana Mining Company [fictitious name] long-term sustainability and ability to create enduring value (Integrated Annual Report, 2020, p. 1)*

*Monthly and quarterly, we send sustainability reports to the Region and Corporate offices. The Ghana Chamber of Mines and The Environmental Protection Agency also has an interest in our activities (Middle Manager 3).*

*Some of our stakeholders particularly, community leaders and members, are not even aware of the reports we post on our websites, not to examine it. Most of them may find it difficult to read and understand the terms in those reports. We, therefore, choose ways other than the report to communicate with them (Middle Manager 5).*

According to a document presented to analysts, a key function of Ghana Mining Company's environmental unit included "Monitoring and reporting (blast, dust, noise, water, soil)" (Ghana Mining, 2015). Thus, the environmental unit provides sustainability information every month to the parent company for processing and forwarding to the GRI. An interviewee added:

*Our department is also responsible for reporting to industry associations like the Ghana Chamber of Mines, the Carbon Disclosure Index, and the Global Reporting Initiative on our sustainability figures every month. (Lower Manager 3)*

It was indicated by another interviewee that,

*What I do here [at the subsidiary] is to capture the data and forward it to the corporate level in South Africa, where they process the data for the GRI (Lower Manager 2)*

A functional manager explained the content of the GRI report:

*We report on everything to the GRI, both the cost and quantities of how much went into pollution prevention, rehabilitation, environmental audit, community investments and many more. (Middle Manager 4)*

## **5.2. Informal forms and channels of sustainability reporting to employees and community**

### **5.2.1. Forms and channels of reporting to employees**

Employees were asked if they keep up to date on sustainable development policies and how they get involved. It was announced that Ghana Mining has programs in place to raise sustainability awareness. Sustainability meetings are held every two weeks and every month and departmental meetings such as "walk the talk" and "toolbox" meetings, email updates, and notice boards on site. Reports on health and safety, protection, community improvements, and gold production and production in terms of ore mined and waste mined are disseminated through these media outlets.

#### ***Meetings***

Departmental and unit meetings are held once a week. Employees and managers raised concerns about the department, as well as problems affecting their job from other agencies.

*"...we are holding regular meetings to present our progress against our project plan and to identify and address any concerns from these communities (Integrated annual Report, 2020, p. 88)*

According to a functional manager:

*We summarise the financial performance of the company every month and report to employees during monthly meetings. Also, each department holds weekly meetings to shared ideas on the incidence that happened within the department that affects their work (Middle Manager 1).*

Monthly sustainability meetings are held with the General Manager, functional managers, and staff. Employees bring any environmental issues to the attention of their bosses and colleagues at these sessions, where they discuss and devise steps to resolve the issues. According to a functional boss,

*At the monthly meeting too, we invite employees to give us feedback or give any concerns about their workplace which affects the performance of the company and once this is raised, we pick it up (Middle Manager 1)*

Elaborating on proceedings at the "toolbox meetings," a comment from an employee:

*Before the start of any shift, we have a toolbox meeting. In the toolbox meeting, we [employees] are allowed to report and discuss any safety violations or any opportunity to improve safety that they observed during the previous days (Non-managerial employees 1).*

### ***Intranet***

Management considers it important for workers and management to be aware of information exchanged through the intranet. On-site events, such as injuries and safety-related issues, as well as modifications made on-site, may be included. A functional manager went on to say:

*We set up a dedicated public Covid-19 portal on our website, which provided a central repository for all information and communication material. (Integrated Annual Report, 2020, p. 58)*

*We share information across the board through our intranet whenever there are issues or things that we need to discuss or share before any of the scheduled meetings. (Middle Manager 4)*

### ***Notices***

Aside from monthly meetings, email updates, and information dissemination through the intranet, the Safety, Health, and Environment Departments create monthly topics normally displayed on notice boards. These notices are shown at the mine's main entrance, reception, and administrative block. As a result, these notices are accessible to management, staff, contractors, and tourists. An employee confirmed, pointing to a note at the reception:

*We post updated health and safety reports from the beginning of each year on the notices to inform employees, contractors, and anyone who gets around to know the number of accidents we have had on sites, the last day of accident on-site, and even the types of accidents that occurred. (Middle Manager 3)*

*Every month we have a cost message for all employees, so last month's was to avoid wastage and save cost. Throughout the month, we keep educating them on how to reduce waste and the benefits of reducing waste. (Middle Manager 2)*

On my first visit, which was in January, I found on the notice board "Know your environmental policy" as the environmental topic for the month. However, during the second visit of the lead author, second in June 2016, the topic for the month was "protect wild animals" (Observation)

*Nowadays, social media, particularly WhatsApp, is often used to send our environmental, health and safety messages to us [employees] and community members. WhatsApp is very efficient in getting responses from us [employees] and community leaders as it allows stakeholders to respond to messages posted. We also have a Facebook accounts for Ghana Mining Foundation where we post information on our sustainability activities and miles stones so far (Non-managerial employee)*

The lead author discovered uploads of programs conducted in stakeholder communities when browsing the Ghana Mining Foundation's Facebook page. Managers and staff from five departments/units, namely Environment, Community Affairs, Protection Services, Safety and Health, were photographed presenting awards and speeches to community members.

*The Ghana Mining Foundation – which since 2004 has invested over US\$66.5 million in host community development – won Foundation of the Year and Project of the Year at the Sustainability and Social Investment Awards. (Ghana Mining Foundation Facebook page, accessed, April 14, 2019).*

At Ghana Mining, social media is another channel that has contributed to the improvement of sustainability reporting, providing sustainability reporting with the opportunity to significantly change both organisations and stakeholders (Manetti and Bellucc, 2016; Unerman and Bennett, 2004).

### **5.2.2. Forms and channels of reporting to the community**

#### **Liaison officers**

Management and Liaison officers from the mining subsidiary use informal means of communication when reporting to traditional rulers, opinion leaders and community members. These usually take the form of face-to-face interactions between the mining firm's management

and individual groups within the community or the community through liaison officers who are the staff of the mining firm. Two managers explained it in this way:

*Liaison officers and employed external affairs managers are also used for district and liaison officers who also have subordinates at each village with about five staff at the mining firm who work for Ghana Mining Company. The liaison officers interact with the youth leader and community leaders (Middle Manager 1).*

*The external affairs department has community liaison officers in each town. If we want to meet community leaders or members, we send letters through these liaison officers to invite the particular group of persons we want to meet. (Middle Manager 5)*

The main role of the liaison officers is to serve as a connection between the mining company and the host community. As such, most liaison officers serve communities they come from, as that to an extent is believed to facilitate their roles since they may be familiar with the contexts of their territories.

### **Durbars and festivals**

Besides the face-to-face meetings, the mining firms also seize opportunities to communicate with the people during annual traditional festivals. During these festivals, people from far and near, including politicians and indigenes locally and in the diaspora, attend these durbars and the excerpts below explain how that is done.

*Whenever there is any festival in any of the catchment areas, we seize that opportunity to interact with them on our operations. We keep assuring them of the prospect of the mining company and how the mining company is contributing and will continue to assist them (Middle Manager 3)*

*Our representatives are engaged by the management of the mining company quarterly. During our Community Durbars, they (the representatives) present the performance of the mining company and the community development initiatives introduced by the Mine (Middle Manager 5).*

*On the issue of the mining pits being raided at times, we have sent several warnings through community leaders but to no avail. We have notice boards in all the communities affected by our operations and even communicate through that channel (Middle Manager 1).*

## 6.0. Discussions

This article explores the formal and informal forms and channels of sustainability reporting of a subsidiary of a gold mining company operating in Ghana. Drawing on stakeholder salience, we found that gold mining subsidiaries of the MNC choose both formal and informal forms and channels to respond to both stakeholder pressures from internal and external stakeholders such as parent company, host communities, regulatory bodies, and non-governmental organisations (see Figure 2). Thus, the company under study must submit its sustainability reports to corporate headquarters, regulators, and the general public (via annual reports), nonetheless, in reporting to traditional rulers and community members, informal reporting which is through word of mouth at festivals and durbars as well as through social media platforms.

Insert Figure 2 about here

The Mining sector in Ghana is claimed by Andrews (2018) and Amoako et al., (2018) to several stakeholders, with the major one being the investors, employees, regulators, traditional rulers, and community members. Findings from this study emphasis the need for mining companies operating in emerging economies to adopt various strategies to report to diverse stakeholder groups in maintaining legitimacy. It was discovered that there are formal and informal forms and channels of sustainability reporting within the context of emerging economies. However, the informal forms and channels of sustainability reporting are mostly not reported in existing studies (e.g., The KPMG, 2014; Duff, 2016; Jose & Lee, 2007; Morhardt, 2010). Rather, these studies claim that sustainability reporting is usually printed in hard copies and most often posted on corporate websites. In this study, the subsidiary of the mining company prepares specific sustainability reports that are mandatory by the parent company and by law or regulatory directives from regulatory bodies such as the EPA, the Minerals Commission, and external auditors who then use these reports for audit purposes. There was evidence that the case company prepares its sustainability reports for internal decision-making. The subsidiaries see the need to internally conform to group norms and particular institutional practices or to satisfy professional expectations. The reports conformed to the GRI reporting guidelines, which are voluntary and yet regarded as normative due to their acceptance by accounting and other professionals and several MNEs in the world (KPMG, 2008, 2011). This agrees with stakeholder theory propositions that, because of their greater comparability and utility, structured reporting formats for corporate environmental protection will help stakeholders

make better decisions (Gallego-Álvarez and Ortas, 2017). The GRI's idea is that organizational openness can be used to foster fruitful debate about environmental, social and governance issues (Ortas, Gallego-Alvarez, & Alvarez, 2019). The adoption of international standards such as the GRI for reporting by Ghana Mining Company is consistent with Stakeholder Theory, which notes that businesses that are more environmentally aware such as the mining sector, develop standards to maintain continuity and predictability.

Besides the use of printed annual reports, the case company uses the corporate website to disseminate the annual reports as well as sustainability information on community projects and environmental protection initiatives. This aligns with the discovery that increasingly companies in environmentally sensitive industries such as mining use the internet to disseminate their environmental results due to the ever-increasing number of internet users and the internet's perceived benefits (KPMG, 2014; Lodhia, 2018).

As depicted in the Empirical Framework (Figure 2), the informal forms of sustainability reporting are mainly adopted to communicate to employees, traditional rulers, community members and opinion leaders. Thus, in communicating with employees, Ghana Mining Company chooses channels such as emails, meetings, social media, and notices to report on the company's weekly, monthly, and annual performance. In addition to the sustainability reports issued by gold mining companies in Ghana, we found that public relation practices in sustainability reporting as Liaison Officers communicated to community members and leaders. Again, the case mining company adopts these informal communications, particularly through meetings with local community representatives and occasionally by meeting the local communities during festivals and durbars to explain sustainability matters. Furthermore, periodic meetings with community leaders and durbars with communities affected by mining operations are held to deliberate over the consequences of mining activities and the mitigating measures put in place by the companies to reduce their impact on the environment. These findings resonate with Kim and Kim's (2009) argument that sustainability reporting appears to be perceived by public relations practitioners as a critical tool to ensure both organizational and societal welfare. Our findings agree with stakeholder theory that building dialogue and participation with stakeholders add to our understanding of sustainability reporting forms and channels and broadens our view of stakeholder interaction as a procedural and strategic phenomenon for businesses (Stocker, Arruda & Mascena, 2019).



Social media also play an extensive role in the reporting process of the case mining company as communications are carried out on Facebook and WhatsApp groups of employees and community leaders. These studies affirm the propositions of stakeholder theory that the tendency of organisations to adopt pragmatic engagement tools (Deegan, 2006) such as the use of social media for legitimising their activities is still strong (Albarrak et al., 2019; Lodhia et al., 2020). These findings are similar to extant studies in advanced economies where Twitter is mainly used as a social media platform to communicate to and with stakeholders (Albarrak et al., 2019; Årup Nielsen, 2016). Within the Ghanaian context, besides the use of annual reports and corporate websites, which are formal means of reporting, Ghana Mining Company uses WhatsApp and Facebook as the main social media tools in their communicating strategy to gain credibility. Like other studies, these media allow stakeholders to participate in an informal way of communication (Gómez-Carrasco et al., 2020).

With the high illiteracy rate in rural Ghana (Dumenu & Obeng, 2016), it was not surprising that community members of the case mining company were not aware of formal sustainability reports. Consequently, Ghana Mining Company communicates to community members on a regular basis using informal approaches to sustainability reporting, such as communicating to them during durbars, through liaison officers and face-to-face meetings. These informal channels of communication are critically important in responding to stakeholder pressure in a developing economy context where communities may either not be aware of the existence of sustainability reports or be less concerned about written reports and instead are more interested in the impact of mining companies on their immediate environment including degradation and pollution of land, water, and air. Thus, this study shows the importance of adopting sustainability reporting forms and channels to suit stakeholder groups. This may indicate the complexities of the legitimacy issues associated with the sustainability reporting of mining industry subsidiaries compared to large domestic mining companies. Our findings agree with stakeholder theory that an organisation could adopt diverse innovative ways in building dialogue and participation with various stakeholders. Specifically, our understanding of sustainability reporting forms and channels broadens our the stakeholder interaction approach as a fluid and strategic phenomenon (Stocker et al., 2019), MNE in the mining sector.

These informal channels may not be obvious in developed economies due to variations in literacy rates, policy development, civil society, institutional systems, regulatory frameworks and stakeholders' expectations (Amoako et al., 2018; Belal and Owen, 2015; Uddin et al., 2017). As a result, some underlying stakeholder groups and their reporting requirements in

emerging markets differ from those in developed economies (Tilt, 2018; Ansu et al., 2021; Katamba et al., 2012; Nyahunzvi, 2013; Mzembe and Meaton, 2014; Ives and Buchner, 2011). Findings in this study demonstrate that community members in mining communities in Ghana, an emerging economy, who are largely illiterate and seeking social benefits in mining companies, are well engaged in durbars and festivals. These findings resonate with the cultural aspects of sustainability practices of Lorenzo et al. (2013) and stakeholder theory that corporate institutions adopt various stakeholder engagement practices depending on the context.

## **7.0. Conclusions and implications**

We explored the forms and channels of sustainability reporting of a mining subsidiary of an MNC in Ghana, using stakeholder perspectives. We found that in Ghana's gold mining industry, the subsidiary of a multinationals' choice of forms and channels for reporting on sustainability was influenced by the desire to attain internal legitimacy with the subsidiary's parent MNC and the pursuit of external legitimacy with influential domestic and international stakeholders. In doing so, the case mining company used informal and verbal communications to address matters arising with local community leaders and members whose sustainability concerns could disrupt the activities of the mining subsidiaries and yet might not have access to or be interested in reading the sustainability reports. However, these informal forms of sustainability reporting are not reported in existing studies. This article, therefore, shows the importance of informal forms of sustainability reporting and the importance of adopting sustainability reporting to suit stakeholder groups.

The findings of this paper have both theoretical and practical implications. The study adds a new dimension to the literature on sustainability reporting by examining the forms and channels behind stakeholder-subsiary, parent-subsiary, and external stakeholder relationships in sustainability reporting practices in the mining industry. It also contributes to the sustainability reporting literature by showing the importance of informal communication forms in reporting to local community leaders and members in a developing economy context. Thus, highlighting the need to adapt different sustainability reporting forms and channels to communicate with diverse key stakeholder groups.

Practically evidence in this article indicates that in emerging economies,, sustainability reporting is based on requirements to meet parent's, local, and international stakeholders' expectations. Given that legitimacy factors dominated reporting, the implication is that

sustainability reporting is not necessarily based on management intent regarding sustainability issues.

We acknowledge that our study was limited in scope as we couldn't have access to both subsidiaries of the MNC that were used for this study. Therefore, generalising the findings from this study was done with some sort of caution.

Lastly, we recommend further studies to be conducted in emerging economies in industries other than mining to explore the entire process of sustainability reporting in their host communities.

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## Appendix 1: GRI Index – Mining and Metals Industry

Category	Economic	Environmental			
	Economic Performance Market Presence Indirect Economic Impacts Procurement Practices	Materials Energy Water Biodiversity Emissions Effluents and Waste Products and Services Compliance Transport Overall Supplier Environmental Assessment Environmental Grievance Mechanisms			
Category	Social				
Categories	Labor Practices and Decent Work		Human Rights	Society	Product Responsibility
	Employment Labor/Management Relations Occupational Health and Safety Training and Education Diversity and Equal Opportunity Equal Remuneration for Women and Men Supplier Assessment for Labor Practices Labor Practices Grievance Mechanisms		Investment Non-discrimination Freedom of Association and Collective Bargaining Child Labor Forced or Compulsory Labor Security Practices Indigenous Rights Assessment	Local Communities Anti-corruption Public Policy Anti-competitive Behavior Compliance Supplier Assessment for Impacts on Society	Customer and Safety Product Service Life Marketing Community Customer Compliance Materials Stewardship

		Supplier Human Rights Assessment Human Rights Grievance Mechanisms	Grievance Mechanisms for Impacts on Society Emergency Preparedness Artisanal and Small-scale mining Resettlement Closure Planning	
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**Source: GRI, 2013**

## **Appendix 1: GRI Index – Mining and Metals Industry**